INFORMATION PROCESSING & MANAGEMENT

An International Journal

Editor-in-Chief: **Tefko Saracevic**
Rutgers University

Volume 35 (1999) Contents and Author Index

Pergamon

INFORMATION PROCESSING & MANAGEMENT

—An International Journal—
(Incorporating *INFORMATION TECHNOLOGY*)
Email: ipm@scils.rutgers.edu
Web site: http://www.elsevier.nl/locate/infoproman

Editor-in-Chief

Tefko Saracevic
School of Communication, Information and Library Studies
Rutgers University
4 Huntington Street
New Brunswick, NJ 08903, U.S.A.
tefko@scils.rutgers.edu

Associate Editors

Nicholas J. Belkin
School of Communication, Information and Library Studies
Rutgers University
4 Huntington Street
New Brunswick, NJ 08901-1071, U.S.A.
nick@belkin.rutgers.edu

W. Bruce Croft
Department of Computer and Information Science
University of Massachusetts
Amherst, MA 01003, U.S.A.
croft@cs.umasss.edu

Associate Editor (Europe)

C. J van Rijsbergen
Department of Computing Science
Lilybank Gardens
The University
Glasgow G12 8QQ, Scotland
keith@dcs.gla.ac.uk

Associate Editor (Book Reviews)

Amanda Spink
Associate Professor
School of Information Sciences & Technology
The Pennsylvania State University
State College
PA 16802, U.S.A.
ahs@psu.edu

Founding Editor

Harold Borko
Graduate School of Education and Information Studies
University of California
102 South Hall
Los Angeles, CA 90024-1520 U.S.A.
hborko@ucla.edu

Editorial Board

Maristella Agosti
Padova University, Padova, Italy
agosti@dei.unipd.it

Tatiana Aparac
University of Zagreb, Zagreb, Croatia
taparac@mudrac.ffzg.hr

Trudi Bellardo Hahn
University of Maryland, MD U.S.A.
th90@umail.umd.edu

David C. Blair
University of Michigan
Ann Arbor, MI U.S.A.
dcblair@sils.umich.edu

Abraham Bookstein
University of Chicago, Chicago, IL U.S.A.
a-bookstein@uchicago.edu

Michael Buckland
University of California
Berkeley, CA U.S.A.
buckland@sims.berkeley.edu

Yves Chiaramella
University of Grenoble
Grenoble Cedex, France
chiara@imag.fr

Lee Feng Chien
Academia Sinica, Taipei, Taiwan
lfchien@iis.sinica.edu.tw

Raya Fidel
University of Washington
Seattle, WA U.S.A.
fidelr@u.washington.edu

Edward A. Fox
Virginia Polytechnic Institute & State University
Blacksburg, VA U.S.A.
fox@fox.cs.vt.edu

H. P. Frei
Union Bank of Switzerland
Zurich, Switzerland
frei@ubilabubs.com

Jonathan Furner
University of California
Los Angeles, CA U.S.A.
jfurner@ucla.edu

Donna Harman
National Institute of Standards & Technology
Gaithersburg, MD U.S.A.
donna.harman@nist.gov

David Harper
The Robert Gordon University
Aberdeen, Scotland
djh@scms.rgu.ac.uk

William Hersh
Oregon Health Sciences University
Portland, OR U.S.A.
hersh@ohsu.edu

Peter Ingwersen
The Royal School of Library and Information Science
Copenhagen, Denmark
pi@db.dk

Tetsuya Ishikawa
University of Library and Information Science
Taukuba, Japan
ishikawa@ulis.ac.jp

Kalervo Järvelin
University of Tampere, Tampere, Finland
kalervo.jarvelin@uta.fi

Paul B. Kantor
Rutgers University
New Brunswick, NJ U.S.A.
kantor@scils.rutgers.edu

Haruo Kimoto
Nippon Telegraph and Telephone Corporation
Yokosuka, Japan
kimoto@isl.ntt.co.jp

Gehard Knorz
Fachhochschule Darmstadt
Darmstadt, Germany
knorz@www.iud.fh-darmstadt.de

Rainer Kuhlen
Universitat Konstanz, Konstanz, Germany
rainer.kuhlen@uni-konstanz.de

Elisabeth D. Liddy
Syracuse University, Syracuse, NY U.S.A.
liddy@mailbox.syr.edu

John Lindsay
Kingston University
Kingston upon Thames, U.K.
lindsay@king.ac.uk

Elisabeth Logan
Florida State University
Tallahassee, FL U.S.A.
logan@lis.fsu.edu

Gary Marchionini
University of North Carolina
Chapel Hill, NC U.S.A.
march@ils.unc.edu

Richard S. Marcus
Massachusetts Institute of Technology
Cambridge, MA U.S.A.
marcus@lids.mit.edu

Michel J. Menou
Consultant in Information Management
Les Rosiers sur Loire, France
mmenou@imaginet.fr

Jessica L. Milstead
The JELEM Company
Indian Head, MD, U.S.A.
milstead@jelem.com

Sung Hung Myaeng
Chungnam National University
Taejon, Korea
shmyaeng@cs.chungnam.ac.kr

Desai Narasimhalu
National University of Singapore
Singapore
desai@krdl.org.sg

Fausto Rabitti
Consiglio Nazionale delle Ricerche
Pisa, Italy
F. Rabitti@cnuce.cnr.it

Roy Rada
Pace University
Pleasantville, NY, U.S.A.
R.Rada@pace.edu

Edie M. Rasmussen
University of Pittsburgh
Pittsburgh, PA U.S.A.
erasmus@sis.pitt.edu

Stephen E. Robertson
Microsoft Research Ltd, Cambridge, U.K.
ser@microsoft.com

Nancy Roderer
National Library of Medicine
Bethesda, MD U.S.A.
nancy_roderer@nlm.nih.gov

Karen Sparck Jones
University of Cambridge, Cambridge, U.K.
sparckjones@cl.cam.ac.uk

Author Services Department: For queries relating to the general submission of articles (including electronic text and artwork) and the status of accepted manuscripts, please contact the Author Services Department: *E-mail:* authors@elsevier.co.uk; *Fax:* +44 (0) 1865 843905; *Tel:* +44 (0) 1865 843900.

Publication information: Information Processing & Management (ISSN 0306-4573). For 1999, volume 35 is scheduled for publication. Subscription prices are available upon request from the Publisher or from the Regional Sales Office nearest you or from this journal's website (http://www.elsevier.nl/locate/infoproman). Further information is available on this journal and other Elsevier Science products through Elsevier's website: (http://www.elsevier.nl). Subscriptions are accepted on a prepaid basis only and are entered on a calendar year basis. Issues are sent by standard mail (surface within Europe, air delivery outside Europe). Priority rates are available upon request. Claims for missing issues should be made within six months of the date of dispatch.

Orders, claims, and product enquiries: please contact the Customer Support Department at the Regional Sales Office nearest you:
New York: Elsevier Science, PO Box 945, New York, NY 10159-0945, USA; phone: (+1) (212) 633 3730 [toll free number for North American customers: 1-888-4ES-INFO (437-4636)]; fax: (+1) (212) 633 3680; e-mail: usinfo-f@elsevier.com
Amsterdam: Elsevier Science, PO Box 211, 1000 AE Amsterdam, The Netherlands; phone: (+31) 20 4853757; fax: (+31) 20 4853432; e-mail: nlinfo-f@elsevier.nl
Tokyo: Elsevier Science, 9-15 Higashi-Azabu 1-chome, Minato-ku, Tokyo 106-0044, Japan; phone: (+81) (3) 5561 5033; fax: (+81) (3) 5561 5047; e-mail: info@elsevier.co.jp
Singapore: Elsevier Science, No. 1 Temasek Avenue, #17-01 Millenia Tower, Singapore 039192; phone: (+65) 434 3727; fax: (+65) 337 2230; e-mail: asiainfo@elsevier.com.sg
Rio de Janeiro: Elsevier Science, Rua Sete de Setembro 111/16 Andar, 20050-002 Centro, Rio de Janeiro - RJ, Brazil; phone: (+55) (21) 509 5340; fax: (+55) (21) 507 1991; e-mail: elsevier@campus.com.br [Note (Latin America): for orders, claims and help desk information, please contact the Regional Sales Office in New York as listed above]

© 1999 Elsevier Science Ltd. All rights reserved.

Periodicals postage is paid at Rahway, NJ. Information Processing & Management (ISSN 0306-4573) is published six issues per year, January, March, May, July, September and November by Elsevier Science Ltd., The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, UK. The US subscription price is $855.00 per year.
POSTMASTER: Send address corrections to: Information Processing & Management, Elsevier Science, Customer Support Department, PO Box 945, New York, NY 10159-0945.
Distributed in the USA by Mercury Airfreight International, 365 Blair Road, Avenel, NJ 07001.

LIST OF CONTENTS

Number 1

John Tebbutt	1	User evaluation of automatically generated semantic hypertext links in a heavily used procedural manual
Myoung-Cheol Kim **Key-Sun Choi**	19	A comparison of collocation-based similarity measures in query expansion
Wolfgang Glänzel **Urs Schoepflin**	31	A bibliometric study of reference literature in the sciences and social sciences
Maureen McCreadie **Ronald E. Rice**	45	Trends in analyzing access to information. Part I: cross-disciplinary conceptualizations of access
Maureen McCreadie **Ronald E. Rice**	77	Trends in analyzing access to information. Part II. Unique and integrating conceptualizations

Number 2

Norbert Fuhr	101	Towards data abstraction in networked information retrieval systems
M. Boughanem **C. Chrisment** **C. Soulé-Dupuy**	121	Query modification based on relevance back-propagation in an ad hoc environment
Michael Gordon **Praveen Pathak**	141	Finding information on the World Wide Web: the retrieval effectiveness of search engines
Abderrafih Lehmam	181	Text structuration leading to an automatic summary system: RAFI
Liwen Qiu Vaughan	193	The contribution of information to business success: a LISREL model analysis of manufacturers in Shanghai
		Book Reviews
Scott Nicholson	209	*Indexing and Abstracting in Theory and Practice*, Second Edition edited by F. W. Lancaster

Mária Bieliková 210 *Information, Systems and Information Systems—making sense of the field* by Peter Checkland and Sue Holwell

Wendy M. Duff 213 *History and Electronic Artefacts* by E. Higgs

Howard Greisdorf 215 *Into The Future: The Foundations of Library and Information Services in the Post-Industrial Era*, 2nd Edition by Michael H. Harris, Stan A. Hannah and Pamela C. Harris

Number 3

SPECIAL ISSUE

Progress Toward Digital Libraries

Editorial

Gary Marchionini
Edward A. Fox 219 Progress toward digital libraries: augmentation through integration

Christine L. Borgman 227 What are digital libraries? Competing visions

Thomas R. Kochtanek
Karen K. Hein 245 Delphi study of digital libraries

Ann Peterson Bishop 255 Document structure and digital libraries: how researchers mobilize information in journal articles

Robert R. Downs
Edward A. Friedman 283 Digital library support for scholarly research

Lisa M. Covi 295 Material mastery: situating digital library use in university research practices

Charles L. Viles
James C. French 319 Content locality in distributed digital libraries

Mark H. Chignell
Jacek Gwizdka
Richard C. Bodner 339 Discriminating meta-search: a framework for evaluation

Douglas W. Oard
Philip Resnik 365 Support for interactive document selection in cross-language information retrieval

John M. Gauch
Susan Gauch
Sylvain Bouix
Xiaolan Zhu 383 Real time video scene detection and classification

Chaomei Chen 403 Visualising semantic spaces and author co-citation networks in digital libraries

Number 4

SPECIAL ISSUE

Information Retrieval with Asian Languages

421 Editorial

Joon Ho Lee
Hyun Yang Cho
Hyouk Ro Park 427 *n*-Gram-based indexing for Korean text retrieval

Jain-Yun Nie
Fuji Ren 443 Chinese information retrieval: using characters or words?

Yasushi Ogawa
Toru Matsuda 463 Overlapping statistical segmentation for effective indexing of Japanese text

Bo-Hyun Yun
Yong-Jae Kwak
Hae-Chang Rim 481 Alleviating syntactic term mismatches in Korean text retrieval

Lee-Feng Chien 501 PAT-tree-based adaptive keyphrase extraction for intelligent Chinese information retrieval

Kil Soon Jeong
Sung Hyon Myaeng
Jae Sung Lee
Key-Sun Choi 523 Automatic identification and back-transliteration of foreign words for information retrieval

Hideki Tanaka
Tadashi Kumano
Noriyoshi Uratani
Terumasa Ehara 541 An efficient document clustering algorithm and its application to a document browser

Taewan Kim
Chul-Min Sim
Sanghwa Yuh
Hanmin Jung
Young-Kil Kim
Sung-Kwon Choi
Dong-In Park
Key Sun Choi
559 FromTo-CLIR™: web-based natural language interface for cross-language information retrieval

Number 5

Laura L. Downey
Dawn M. Tice
589 A usability case study using TREC and ZPRISE

G. Ciocca
R. Schettini
605 A relevance feedback mechanism for content-based image retrieval

Gianni Amati
Fabio Crestani
633 Probabilistic learning for selective dissemination of information

Kalervo Järvelin
Timo Niemi
655 Integration of complex objects and transitive relationships for information retrieval

Stewart Greenhill
Svetha Venkatesh
679 Constructing and navigating personalised views of the Web

Michail Salampasis
John Tait
691 A link-based collection fusion strategy

Book Reviews

David Bearman
713 *Information Management in Museums, Second Edition*, by Elizabeth Orna and Charles Pettitt

Joel Dunn
715 *Computers and Design in Context*, edited by Morten Kyng, Lars Mathiassen. MIT Press, 1997

Martin Courtois
717 *Internet Issues and Applications, 1997–98*, by B. J. Dempsey and P. Jones (Eds.)

Geoffrey C. Bowker
718 *Technology and privacy: the new landscape*, by P. Agre and M. Rotenberg

Peiling Wang
720 *Ink into bits: a web of converging media*, by Charles T. Meadow

Number 6

SPECIAL ISSUE

Information Seeking in Context (ISIC)

Carol C. Kuhlthau **Pertti Vakkari**	723	Editorial
Brenda Dervin	727	On studying information seeking methodologically: the implications of connecting metatheory to method
Sanna Talja **Heidi Keso** **Tarja Pietiläinen**	751	The production of 'context' in information seeking research: a metatheoretical view
Reijo Savolainen	765	The role of the internet in information seeking. Putting the networked services in context
Catherine Sheldrick Ross	783	Finding without seeking: the information encounter in the context of reading for pleasure
Karen E. Pettigrew	801	Waiting for chiropody: contextual results from an ethnographic study of the information behaviour among attendees at community clinics
Pertti Vakkari	819	Task complexity, problem structure and information actions. Integrating studies on information seeking and retrieval
Tom Wilson	839	Exploring models of information behaviour: the 'uncertainty' project
Ross J. Todd	851	Back to our beginnings: information utilization, Bertram Brookes and the fundamental equation of information science
Kyunghye Yoon **Michael S. Nilan**	871	Toward a reconceptualization of information seeking research: focus on the exchange of meaning